

ABSTRACT

There is provided a field emitter array on a substrate. The field emitter array includes field emitter devices. At least one of the field emitter devices includes a conducting gate layer having a top surface and at least one side surface, disposed over the substrate. The at least one of the field emitter devices also includes a field emitter tip disposed on the substrate adjacent the at least one side surface, and an insulating layer disposed at least on at least one side surface adjacent the field emitter tip to prevent arcing between the field emitter tip and the conducting gate layer.